

We claim:

1. A double-sided foam tape, the foam tape comprising:

a foam core having first and second opposed surfaces, the foam core comprising an acidic polymer derived from a first group of monomers comprising at least one acidic monomer, and a basic polymer derived from a second group of monomers comprising at least one basic monomer;

a first pressure sensitive adhesive applied to the first surface of the foam core; and

a second pressure sensitive adhesive applied to the second surface of the foam

core.

2. The double-sided foam tape of claim 1, wherein the acidic polymer is a homopolymer and the basic polymer is a copolymer.

3. The double-sided foam tape of claim 1, wherein the acidic polymer is a copolymer and the basic polymer is a homopolymer.

4. The double-sided foam tape of claim 1, wherein the acidic polymer is a copolymer and the basic polymer is a copolymer.

5. The double-sided foam tape of claim 1, wherein the first and second pressure sensitive adhesives do not substantially adhere to one another.

6. The double-sided foam tape of claim 1, wherein at least one of the first and second group of monomers comprises at least one (meth)acrylate monomer.

7. The double-sided foam tape of claim 1, wherein each of the first and second group of monomers comprises at least one (meth)acrylate monomer.

8. The double-sided foam tape of claim 1, wherein the first group of monomers comprises at least one basic monomer.

9. The double-sided foam tape of claim 1, wherein the second group of monomers

comprises at least one acidic monomer.

10. The double-sided foam tape of claim 1, wherein the first group of monomers is essentially free of basic monomers.

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11. The double-sided foam tape of claim 1, wherein the second group of monomers is essentially free of acidic monomers.

12. The double-sided foam tape of claim 1, wherein the basic monomer is selected from the group consisting of N,N-dimethylaminopropyl methacrylamide (DMAPMAm), N,N-diethylaminopropyl methacrylamide (DEAPMAm), N,N-dimethylaminoethyl acrylate (DMAA), N,N-diethylaminoethyl acrylate (DEAEA), N,N-dimethylaminopropyl acrylate (MAPA), N,N-diethylaminopropyl acrylate (DEAPA), N,N-dimethylaminoethyl methacrylate (DMAEMA), N,N-diethylaminoethyl methacrylate (DEAEMA), N,N-dimethylaminoethyl acrylamide (DMAEAm), N,N-dimethylaminoethyl methacrylamide (DMAEMAm), N,N-diethylaminoethyl acrylamide (DEAEAm), N,N-diethylaminoethyl methacrylamide (DEAEMAm), 4-(N,N-dimethylamino)-styrene (DMAS), 4-(N,N-diethylamino)-styrene (DEAS), N,N-dimethylaminoethyl vinyl ether (DMAEVE), N,N-diethylaminoethyl vinyl ether (DEAEVE), vinylpyridine, vinylimidazole, and mixtures thereof.

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13. The double-sided foam tape of claim 1, wherein the acidic monomer is selected from the group consisting of an ethylenically unsaturated carboxylic acid, an ethylenically unsaturated sulfonic acid, an ethylenically unsaturated phosphonic acid, and mixtures thereof.

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14. The double-sided foam tape of claim 1, wherein at least one of the first and second group of monomers comprises a vinyl monomer.

15. The double-sided foam tape of claim 1, wherein the second group of monomers comprises greater than 15% by weight of basic monomers.

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16. The double-sided foam tape of claim 4, wherein one of the acidic copolymer and the basic copolymer comprises up to about 5% by weight of the blend.

17. The double-sided foam tape of claim 1, wherein the first pressure sensitive adhesive comprises acrylic acid.

18. The double-sided foam tape of claim 1, wherein the second pressure sensitive adhesive comprises acrylic acid and acrylonitrile.

19. A double-sided foam tape, the foam tape comprising:  
a foam core having first and second opposed surfaces;  
a first pressure sensitive adhesive applied to the first surface of the foam core, the first pressure sensitive adhesive comprising acrylic acid; and  
a second pressure sensitive adhesive applied to the second surface of the foam core, the second pressure sensitive adhesive comprising acrylic acid and acrylonitrile;  
wherein the first and second pressure sensitive adhesives do not substantially adhere to one another; and wherein the foam core is configured to bond to the first pressure sensitive adhesive and the second pressure sensitive adhesive.

20. The double-sided foam tape of claim 16, wherein the foam core comprises an acidic copolymer derived from a first group of monomers comprising at least one acidic monomer, and a basic copolymer derived from a second group of monomers comprising at least one basic monomer.

21. The double-sided foam tape of claim 16, wherein at least one of the first and second group of monomers comprises a vinyl monomer.

22. The double-sided foam tape of claim 16, wherein each of the first and second group of monomers comprises at least one (meth)acrylate monomer.

23. The double-sided foam tape of claim 17, wherein the acidic monomer is selected from the group consisting of an ethylenically unsaturated carboxylic acid, an ethylenically

unsaturated sulfonic acid, an ethylenically unsaturated phosphonic acid, and mixtures thereof.

24. The double-sided foam tape of claim 17, wherein the basic monomer is selected from the group consisting of N,N-dimethylaminopropyl methacrylamide (DMAPMAM), N,N-diethylaminopropyl methacrylamide (DEAPMAM), N,N-dimethylaminoethyl acrylate (DMAA), N,N-diethylaminoethyl acrylate (DEAEA), N,N-dimethylaminopropyl acrylate (DMAPA), N,N-diethylaminopropyl acrylate (DEAPA), N,N-dimethylaminoethyl methacrylate (DMAEMA), N,N-diethylaminoethyl methacrylate (DEAEMA), N,N-dimethylaminoethyl acrylamide (DMAEAM), N,N-dimethylaminoethyl methacrylamide (DMAEMAM), N,N-diethylaminoethyl acrylamide (DEAEAM), N,N-diethylaminoethyl methacrylamide (DEAEMAM), 4-(N,N-dimethylamino)-styrene (DMAS), 4-(N,N-diethylamino)-styrene (DEAS), N,N-dimethylaminoethyl vinyl ether (DMAEVE), N,N-diethylaminoethyl vinyl ether (DEAEVE), vinylpyridine, vinylimidazole, and mixtures thereof.

25. The double-sided foam tape of claim 17, wherein the first and second pressure sensitive adhesives do not substantially adhere to one another.

26. A double-sided foam tape, the foam tape comprising:  
a foam core having first and second opposed surfaces, the foam core comprising an acidic copolymer derived from a first group of monomers comprising at least one acidic monomer, and a basic copolymer derived from a second group of monomers comprising at least one basic monomer;  
a first pressure sensitive adhesive applied to the first surface of the foam core, the first pressure sensitive adhesive comprising acrylic acid; and  
a second pressure sensitive adhesive applied to the second surface of the foam core, the second pressure sensitive adhesive comprising acrylic acid and acrylonitrile;  
wherein the first and second pressure sensitive adhesives do not substantially adhere to one another.

27. The double-sided foam tape of claim 23, wherein the acidic monomer is selected from the group consisting of an ethylenically unsaturated carboxylic acid, an ethylenically unsaturated sulfonic acid, an ethylenically unsaturated phosphonic acid, and mixtures thereof.

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28. The double-sided foam tape of claim 23, wherein the basic monomer is selected from the group consisting of N,N-dimethylaminopropyl methacrylamide (DMAPMAm), N,N-diethylaminopropyl methacrylamide (DEAPMAm), N,N-dimethylaminoethyl acrylate (DMAA), N,N-diethylaminoethyl acrylate (DEAEA), N,N-dimethylaminopropyl acrylate (MAPA), N,N-diethylaminopropyl acrylate (DEAPA), N,N-dimethylaminoethyl methacrylate (DMAEMA), N,N-diethylaminoethyl methacrylate (DEAEMA), N,N-dimethylaminoethyl acrylamide (DMAEAm), N,N-dimethylaminoethyl methacrylamide (DMAEMAm), N,N-diethylaminoethyl acrylamide (DEAEAm), N,N-diethylaminoethyl methacrylamide (DEAEMAm), 4-(N,N-dimethylamino)-styrene (DMAS), 4-(N,N-diethylamino)-styrene (DEAS), N,N-dimethylaminoethyl vinyl ether (DMAEVE), N,N-diethylaminoethyl vinyl ether (DEAEVE), vinylpyridine, vinylimidazole, and mixtures thereof.

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